Filing Date: November 4, 2003

Title: APPARATUS FOR IMPROVING STENCIL/SCREEN PRINT QUALITY

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IN THE CLAIMS

Please amend the claims as follows:

- 1. (Currently Amended) A stencil comprising:
 - a stencil pattern having at least one stencilling opening formed therein:
- a first coating applied to one surface of the stencil pattern and one or more side surfaces of the stenciling stencilling openings and having a surface tension greater than the surface tension of the stencil pattern; and
- a second coating applied to the opposite surface of the stencil pattern and having a surface tension less than the surface tension of the stencil pattern.
- 2. (Original) The stencil of claim 1, wherein the stencil pattern is stainless steel.
- 3. (Original) The stencil of claim 1, wherein the first coating is selected from the group comprising tungsten, tungsten carbide, tungsten nitride, nickel and nickel alloys.
- 4. (Original) The stencil of claim 1, wherein the second coating is a polymeric material.
- 5. (Currently Amended) A process for manufacturing a stencil for assisting in the application of a printable material comprising:

forming a stencil pattern from a sheet of material impervious to the printable material and forming at least one stenciling stencilling opening therein;

coating a top surface of the stencil pattern with a first coating having a surface tension greater than the surface tension of the stencil pattern;

coating one or more side surfaces of the steneiling steneiling openings with the first coating having a surface tension greater than the surface tension of the steneil pattern; and

coating the bottom surface of the stencil pattern with a second coating having a surface tension less than the surface tension of the stencil pattern.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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6. (Currently Amended) The process of claim 5, further comprising spreading a printable

material onto the top surface of the stencil, wherein the spreading of the printable material

includes using a dockering tool blade to assist in spreading the printable material across the top

surface of the stencil pattern and through the stencilling openings.

7. (Canceled)

8. (Currently Amended) The stencil of claim 1, wherein the stenciling opening

corresponds to an adhesive pattern for an integrated circuit die.

9. (Previously Presented) The stencil of claim 1, wherein the second coating includes

polytetrafloroethylene.

10. (Previously Presented) The stencil of claim 1, wherein the second coating includes a surface

tension at least one order of magnitude less than surface tension of a metal.

11. (Previously Presented) The stencil of claim 1, wherein the second coating is to control a

running property of an adhesive.

12. (Previously Presented) The stencil of claim 11, wherein the stenciling opening receives the

adhesive.

13. (Previously Presented) The stencil of claim 1, wherein the first coating includes tungsten.

14. (Currently Amended) The stencil of claim 13, wherein the first coating includes a nitride of

tungsten.

15. (Previously Presented) The stencil of claim 1, wherein the surface tension of the stencil

pattern includes a surface tension of 1384 dyne/cm at melting point.

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16. (Currently Amended) The stencil of claim 1, wherein at least one of the first coating and the second coating includes means for controlling a running property of an adhesive.

17. (Currently Amended) A stencil comprising:

a metal stencil pattern including at least one stenciling stencilling opening formed therein, the stencil pattern includes a surface tension;

a first coating applied to one surface of the stencil pattern and one or more side surfaces of the stenciling stencilling openings, the first coating is selected from the group comprising tungsten, tungsten carbide, tungsten nitride, nickel and nickel alloys, the first coating includes a surface tension greater than the surface tension of the stencil pattern; and

a polymeric second coating applied to the opposite surface of the stencil pattern and having a surface tension less than the surface tension of the stencil pattern.

- 18. (Previously Presented) The stencil of claim 17, wherein the second coating includes polytetrafloroethylene.
- 19. (Previously Presented) The stencil of claim 17, wherein the second coating includes a surface tension at least one order of magnitude less than surface tension of a metal.
- 20. (Previously Presented) The stencil of claim 17, wherein the first coating includes tungsten.
- 21. (Previously Presented) The stencil of claim 17, wherein the stencil pattern includes stainless steel.